

Fig. 1

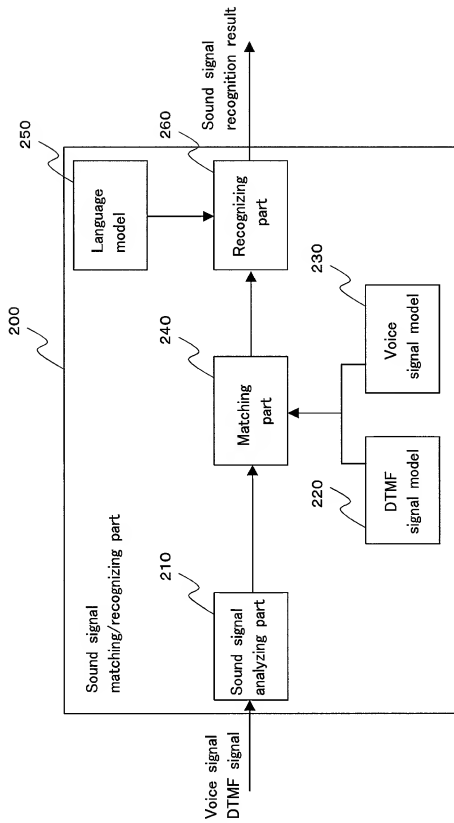


Fig. 2

Word ID	Notation	Reading (Speech)
1	0	"Zero"
2	0	"Null"
3	0	DTMF-0
4	1	"One"
5	1	DTMF-1
6	2	"Two"
7	2	DTMF-2
...
35	YES	"Yes"
36	YES	DTMF-"*"
37	NO	"No"
38	NO	DTMF-#
...

Fig. 3

Word ID	Notation	Reading (Speech)
1	0	"Zero"
1	0	"Null"
1	0	DTMF-0
2	1	"One"
2	1	DTMF-1
3	2	"Two"
3	2	DTMF-2
...
4	YES	"Yes"
4	YES	DTMF- "*" "
5	NO	"No"
5	NO	DTMF- #
...

Fig. 4

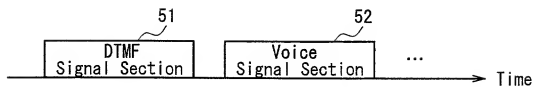


FIG. 5A

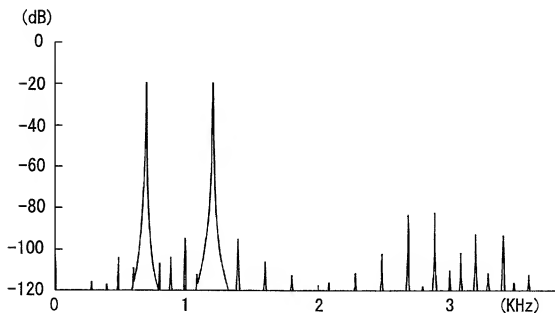


FIG. 5B

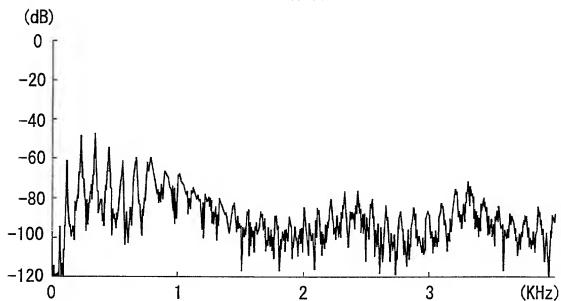


FIG. 5C

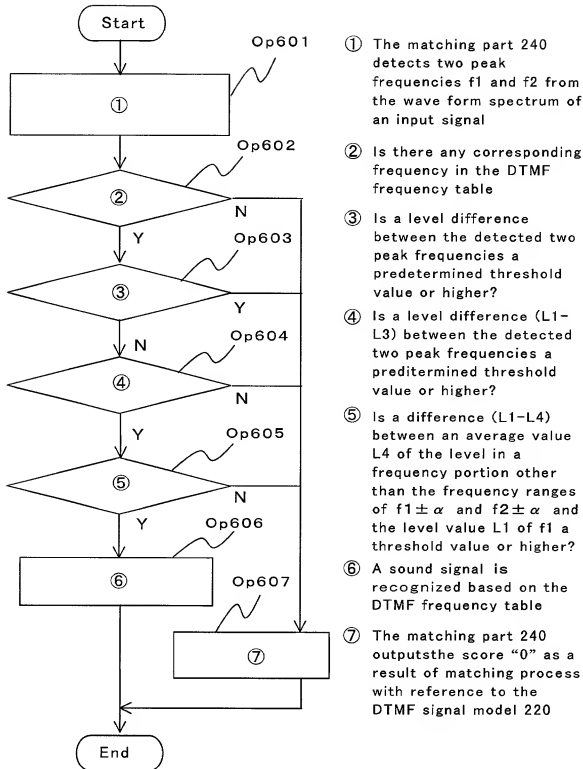


Fig. 6

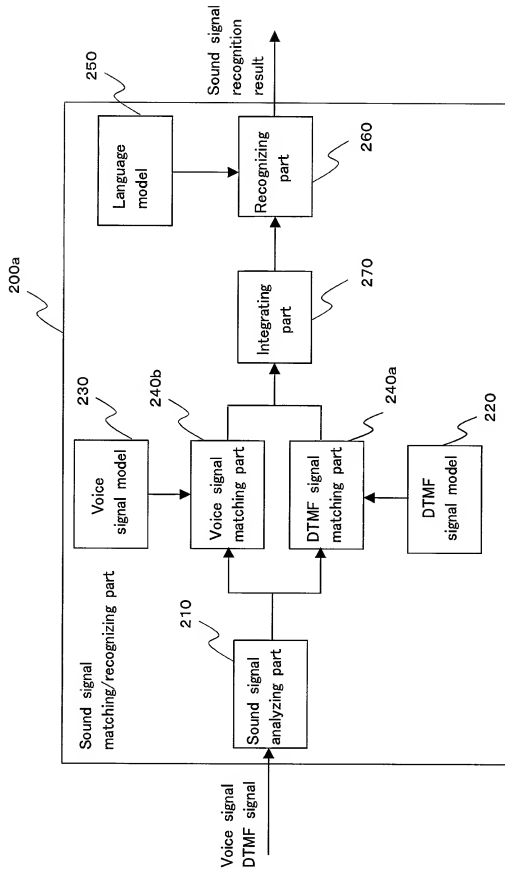


Fig. 7

1082146, 022602

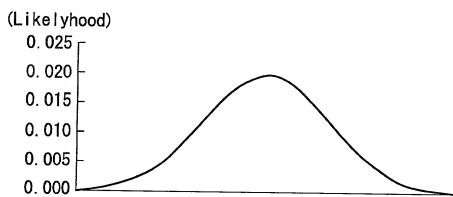


FIG. 8

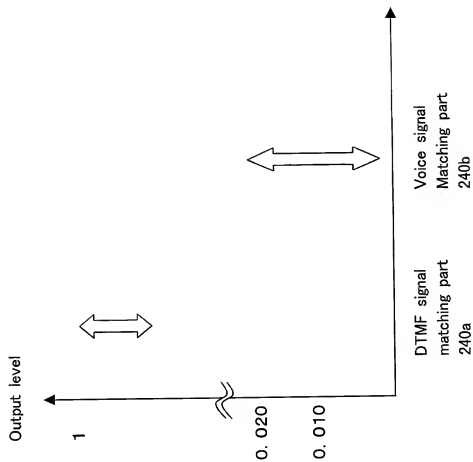


Fig. 9

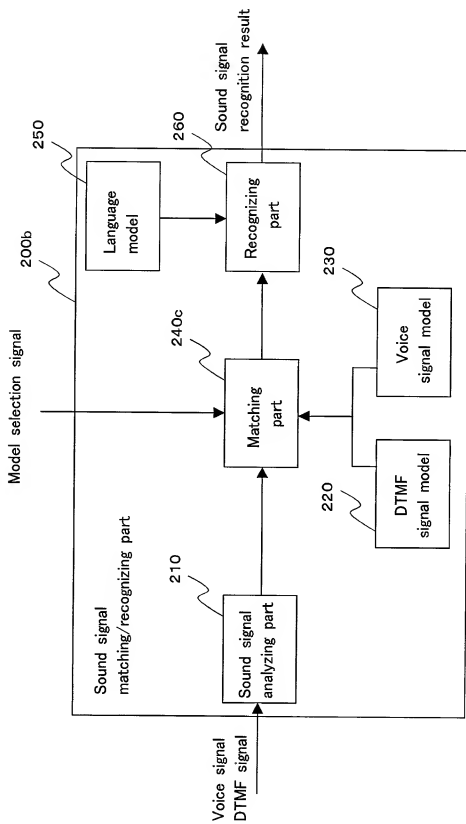


Fig. 10

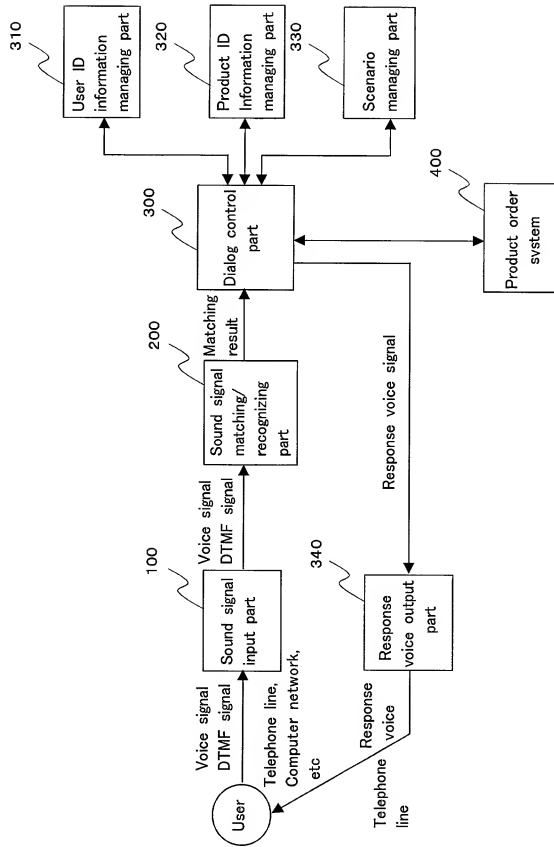


Fig. 11

Dialog Example: (U: User input, S: Response from a dialog system)

- S1: Thank you very much for joining us.
 S2: User ID, please.
 U1: "1212" ("1212" is inputted by tough tone)
 S3: Your name, please.
 U2: Washio
 S4: You are Mr. Washio of User ID 1212? Desired product, please.
 U3: I would like one piece of Product No. "3821" ("3821" is inputted by tough tone).
 S5: One car wax of product No. 3821.
 U4: "YES" (button "x" is pressed and "YES" is inputted by tough tone)
 S6: Your address, please
 U5: Kawasaki city Nakahara "4"- "1" ("4" and "1" are inputted by tough tone
 S6: Kawasaki city Nakahara 4-1? Your order is accepted
 S7: Thank. Please join us again

Fig. 12

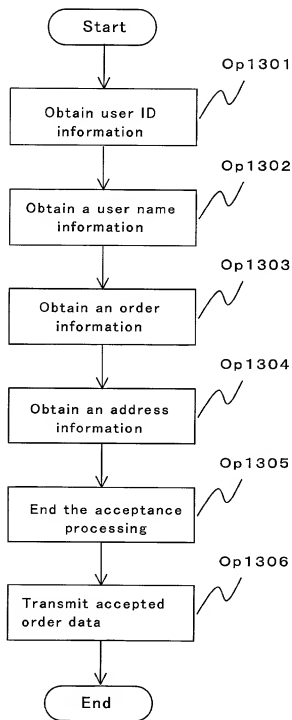


Fig. 13

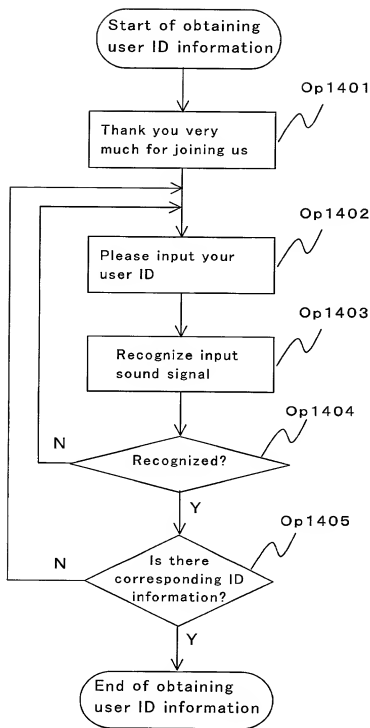


Fig. 14

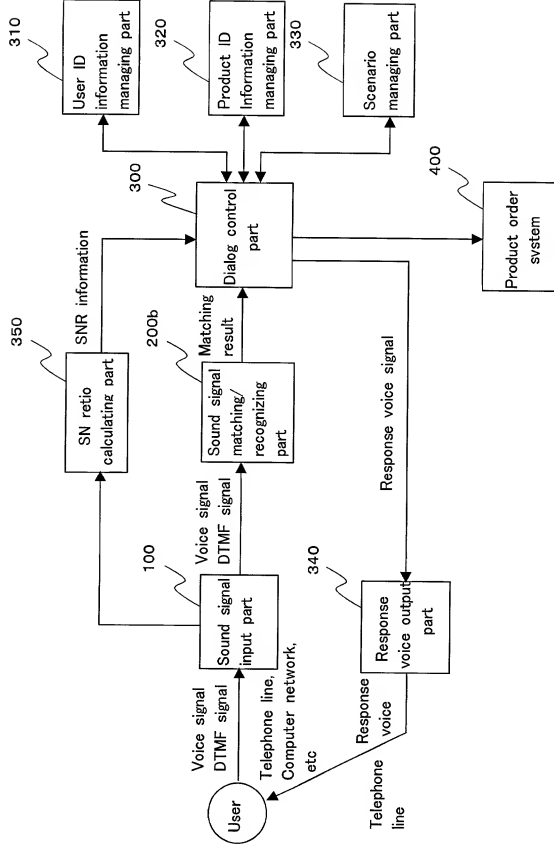


Fig. 15

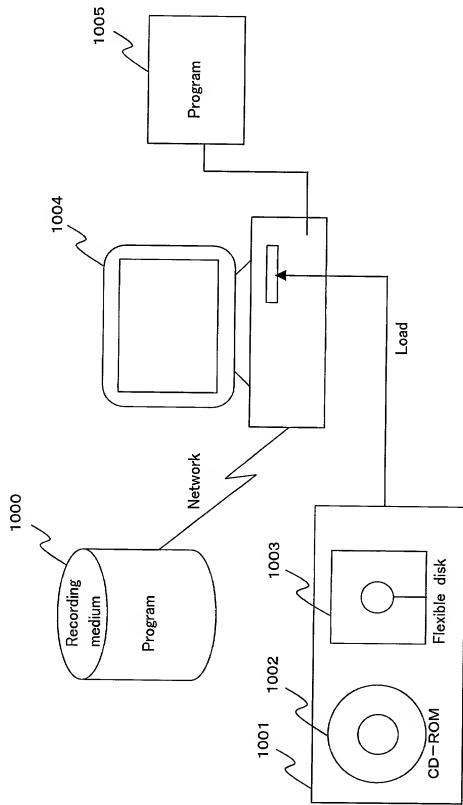
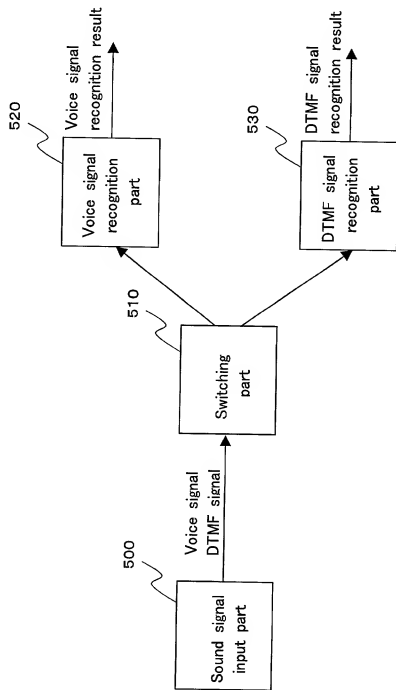


Fig. 16

Frequency [Hz]	1209	1336	1477	1633
697	1	2	3	A
770	4	5	6	B
852	7	8	9	C
941	*	0	#	D

(PRIOR ART)

Fig. 17



(PRIOR ART)

Fig. 18